Disability Access Report

Project: **Residential and Commercial Development**
Address: **134-142 Parramatta Road,**
26-38 Good Street &
59-61 Cowper Street,
Granville
Stage: Development Application

Ref: J000360
Date: 4 November 2019

For: Starryland NSW Australia Pty Ltd

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1. Introduction

1.1 Report Background

Cheung Access Pty Ltd has been commissioned by Starryland NSW Australia Pty Ltd to provide professional Access Consulting services for the proposed construction of a residential development. The site consists of a single podium containing car parking and commercial units with 373 residential units in two towers with a maximum rise of 25 storeys above ground level.

All on-site accessible car parking is proposed to be provided across multiple levels from basement level up to an including level 3, which includes 314 residential spaces, 18 Commercial spaces, 5 car share spaces and 15 visitor spaces. A variety of communal areas includes podium level communal landscaped area, and communal room with kitchen and library.

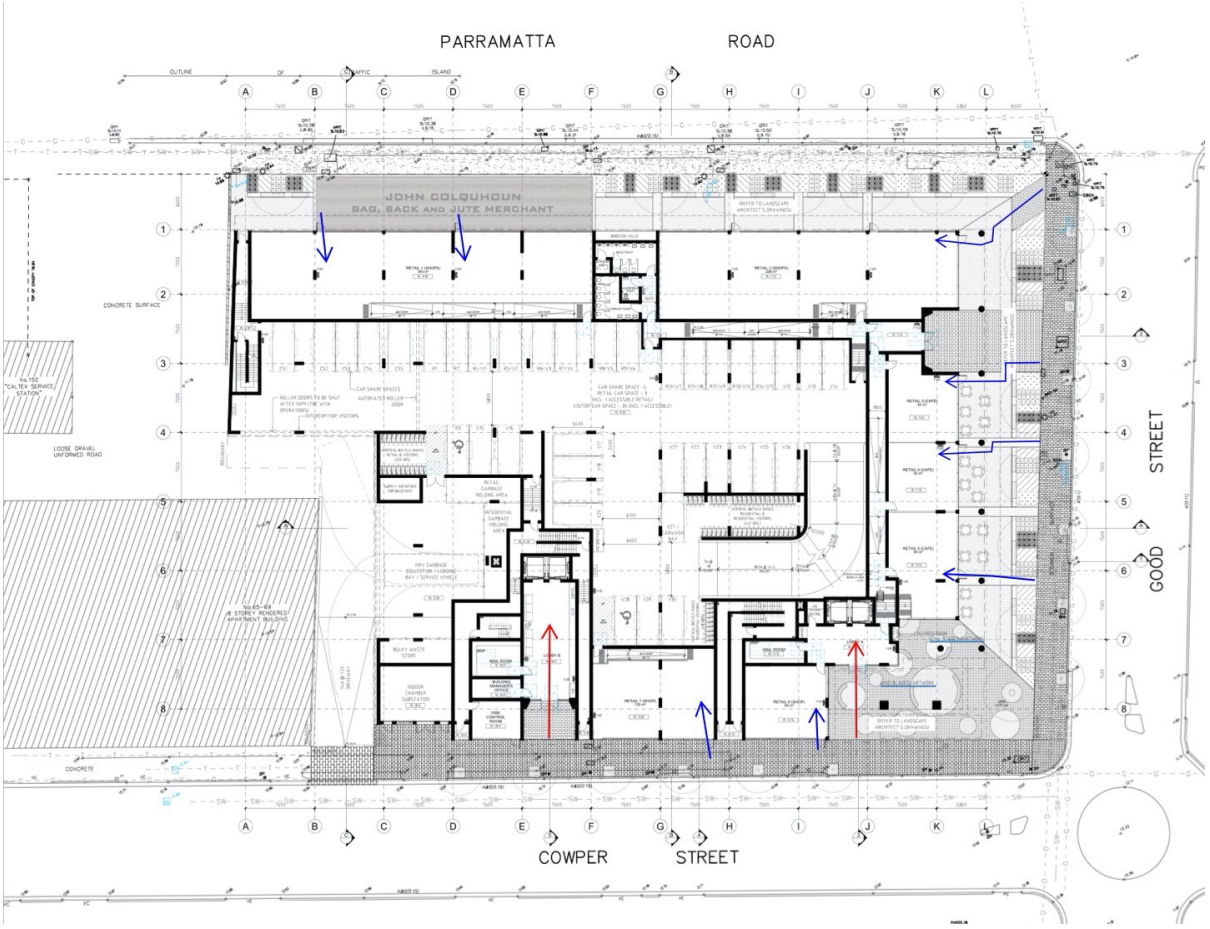

Figure 1 - Ground floor plan - Street entries (blue - retail; red - residential)

Our engagement involved a detailed desktop assessment of the architectural design documentation against the provisions of the Part D3, E3.6 and F2.4 of the National Construction Code Series (Volume 1) Building Code of Australia 2019 (BCA) and controls for

Access for People with Disabilities as outlined in Parramatta Development Control Plan (2011).

1.2 Report Purpose

The key objectives of the report are as follows:

- ❏ Undertake an assessment of the proposed development against:
  - ❏ Part D3, E3.6 and F2.4 Deemed to satisfy provisions of the National Construction Code Series – Volume 1- Building Code of Australia.
  - ❏ Parramatta Council Development Control Plan (2011)
  - ❏ SEPP 65 & Apartment Design Guide Part 4Q-1 Universal Design
- ❏ Identify any compliance departures that require resolution/attention for the proposed development by way of design change or Performance Solutions prior to the submission of the Construction Certificate application.
- ❏ Verify that the referenced documentation has been reviewed by an appropriately qualified Accredited Access Consultant and demonstrate that compliance with the BCA / Access to Premises – Building Standard 2010 / Parramatta DCP is readily achievable.
- ❏ Enable the certifying authority to satisfy its statutory obligations under Clause 145 of the Environmental Planning and Assessment Regulation, 2000 and its statutory obligations under the Building Professionals Regulation 2007.
- ❏ Accompany the submission of the Construction Certificate application to the Consent Authority to enable them to be satisfied that the building design is capable of complying with the NCC/BCA and that subsequent compliance with the access requirements of the BCA, will not give rise to design changes to the proposed units, which may necessitate the submission of additional Section 4.55 applications under the Environmental Planning and Assessment Act, 1979.

Cheung Access has reviewed drawings for the development (Class 2 residential, Class 6 - Retail Shops/Cafes), to assess for consistency with the following disability design criteria contained within:

1. The intent and objects of the Disability (Access to Premises- Buildings) Standards (2010).
2. Part D3, E3.6 and F2.4 of the Building Code of Australia (BCA) 2019
3. Relevant Australian Standards listed in the BCA 2019 and AS4299, as follows:
   a. AS1428.1 Design for Access and Mobility: General requirements for Access – New Building Work (2009)
   b. AS1428.4.1 Design for Access and Mobility: Means to assist the orientation of people with vision impairment – Tactile ground surface indicators (2009)

c. AS1735.12 Lifts, escalators and moving walks – Facilities for persons with disabilities, Amendment 1 (1999).
d. AS2890 (Part 6) (2009) – Parking Facilities – Off-street parking for people with disabilities
e. AS4586 (2013) Slip resistance classification of new pedestrian surface materials

4. The following state and local planning documents;
   Intent of State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development (SEPP 65) & Apartment Design Guide Part 4Q-1 Universal Design - 10% of the total apartments incorporating the Livable Housing Design Guidelines silver level universal design features (2015)
   a. 10% of all residential apartments in accordance with AS4299 - 1995 Adaptable housing

In the preparation of this report, documentation relied upon for the development application stage review is referenced in Appendix A.

1.3 Report Limitations and Exclusions

The limitations and exclusions of this report are as follows:

- ❏ This report is based on a review of the referenced documentation in the Appendix A.
- ❏ This Report does not address issues in relation to the design, maintenance or operation electrical, mechanical, hydraulic or fire protection services, Utility Services Provider Requirements (Water, Gas, Telecommunications and Electricity supply authorities), Local Government Act and Regulations, Occupational Health and Safety Act and Regulations or the like.
- ❏ This assessment does not incorporate the detailed requirements of the BCA Referenced Australian Standards and it's the responsibility of design and installation contractors to demonstrate and achieve compliance for all new works.
- ❏ The commentary within this Access Assessment Report does not relieve the Principal Designer, Principal Building Contractor or the Certifying Authority from their statutory obligations under the EP&A Act, Work Health Safety Act, BPB Act and the like and they are to be satisfied that the proposal meets their requirements prior to approval.
- ❏ It is important to note that without the written permission from Cheung Access Pty Ltd, no part of this report may be reproduced in any form or by any means. This report is based solely on client instructions and therefore should not be relied upon

or used by any third party without prior knowledge and instructions from Cheung Access Pty Ltd.

- ❏ All reasonable attempts have been made to identify key compliance matters pursuant to the BCA and additional issues which have been deemed an impediment to access provision and may increase Client risk of attracting a complaint under the DDA.
- ❏ Cheung Access accepts no responsibility for any loss suffered as a result of any reliance upon such assessment or report other than providing guidance to alleviate access barriers in the built environment and reduce Client risk of attracting a complaint under the DDA.
- ❏ If the layouts or specified fixtures and fittings of the nominated adaptable and livable units are modified by the Client from the date of issue of this access report, then Cheung Access accepts no responsibility for any variations to required access provisions or adaptable or livable housing design specifications.

Exclusions to the access Report:

- ❏ Cheung Access has not reviewed the external pathway lighting. This is the responsibility of the Client to address via design certification from the landscape architect or Electrical Consultant.
- ❏ Cheung Access has not reviewed any new roadside public domain works which are outside the scope of this BCA assessment. This is the responsibility of the Client to address via design certification from the civil engineer or landscape architect.

1.4 Disability Discrimination Act 1992 (DDA)

The Federal Disability Discrimination Act 1992 (DDA) provides protection for everyone in Australia against discrimination based on disability. Section 32 of the DDA focuses on the provision of equitable and dignified access to services and facilities for people with mobility, sensory and cognitive disabilities.

Disability discrimination happens when people with a disability and their relatives, friends, carers, co-workers or associates are treated less fairly than people without a disability. Compliance with Access to Premises Standards give certainty to building certifiers, building developers and building managers that, if access to (new parts) of buildings is provided in accordance with these Standards, the provision of that access, to the extent covered by these Standards, will not be unlawful under the DDA. This however applies only to the new building or new parts of an existing building and its affected part. All areas outside the scope of these areas are still subject to the DDA. We cannot guarantee or certify for DDA

compliance because DDA compliance can only be assessed by the Courts. Scope of DDA extends beyond the building fabric and also includes furniture and fittings.

From 1 May 2011, the Commonwealth's Disability (Access to Premises - Buildings) Standards made under the Disability Discrimination Act 1992 (DDA) applies to all new building work. The Premises Standards, established requirements for access to buildings, that are incorporated into the BCA 2019.

The Premises Standards contain an Access Code of construction that is mirrored in the disability access provisions of the BCA 2019. New building work must comply with the Access Code in the same manner as complying with the BCA 2019 by meeting deemed-to-satisfy provisions or by adopting a performance solution that achieves the relevant performance requirements.

This means if access is provided in accordance with the Premises Standards then it is not unlawful under the DDA. It also ensures that Object 1.3 (a) of the Premises Standards is met which is to:
'Ensure that dignified, equitable, cost-effective and reasonably achievable access to buildings and facilities and services within buildings is provided for people with a disability.'

1.5 Proposed Development

The proposed mixed residential development consists of 373 units which are connected by accessible pathways from the ground level street entrances from existing roads around the site.

Vehicle entry into the car parking for the residential building basement level is via a driveway from Cowper Street. The car park entry is via a laneway on the western side of the development.

BCA Classification:

Class	Level	Description
7a	Basement to Level 3	Car parking
6	Ground	Retail spaces
2	Level 1 to Level 24	Residential Sole Occupancy Units (SOU's)

Areas Required to be Accessible:

Level	Area	Description
Basement	Carparking	Common Areas - lifts, storage, resident storage areas, pathways to lift cores.
Ground Floor portion	Ground floor Portion	To and within all areas normally used by the occupants. From Accessible car parking
Level 1 - level 24	Common area	Common areas- waste rooms, Entrances to building from the site boundary. To doors of Residential Sole Occupancy Units (SOU's) on each level where there is a ramp or lift.

Building overview:

Level	Building Features
External	Carpark Entry on the western side of site Pedestrian access from allotment boundaries Loading Dock / Garbage truck pick up Service areas ● Hydrant booster ● Sub station
Basement	Lift Lobbies x 2 Lifts to Upper levels (two groups of two lifts - 2 x 2 lifts) Fire stairs Parking - 99 Resident parking bays including 8 accessible (AS2890.6) 1 Adaptable Housing (AS4299) Parking aisles Storage cages - 119 Service areas

	• Fire pump room • Fire tank • Car park exhaust room • Garbage Rooms • Domestic Pump room • Comms room • Main Switch room • Mechanical Carpark fan room
Ground Level	**External** Pedestrian access to ground level • retail premises from allotment boundaries on Parramatta Road, Cowper Street and Good Street • Residential lift lobby A and B from Cowper Street **Retail** Retail 1 - shop (Parramatta Road) Retail 2 - shop (Parramatta Road and Good Street corner) Retail 3 - cafe (Good Street) Retail 4 - cafe (Good Street) Retail 5 - cafe (Good Street) Retail 6 - shop (Good and Cowper Streets corner) Retail 7 - Shop (Cowper Street) **Residential** Entry Lobby A Entry Lobby B Lifts - 2 per lift lobby Mail rooms Building Manager's Office Bicycle storage - Residential, Retail and Visitors **Common area** Parking Car Share - 5 parking bays Retail - 19 parking bays including 1 accessible Visitor - 15 parking bays including 1 accessible Parking aisles Female toilet Male Toilet Accessible toilet Access and Service corridor (linking rear of retail premises with toilets and parking)

	Fire stairs Service areas ● Loading dock ● Fire control room ● Indoor chamber substation ● Air intake for basement ● Fire control room ● Booster Valve
Level 1 (Street level)	● 10 SOU (1 bed) 9 x 1 bed and 1 x 2 bed ● Lifts to all other levels ● Lift lobby A and B ● Fire stairs ● Corridors for accessing SOUs ● Garbage Chute adjacent to lift stack A Parking - 68 Resident parking bays including 11 accessible (AS2890.6) Parking aisles Storage cages - 89 Services
Level 2	● 10 SOU (9x 1 bed, 1 x 2 bed) ● Lifts to all other levels ● Lift lobby A and B ● Fire stairs ● Corridors for accessing SOUs ● Garbage Chute adjacent to Tower A lifts ● Communal area Parking - 72 Resident parking bays including 14 accessible (AS2890.6) Parking aisles Storage cages - 68
Level 3	● 10 SOU (9x 1 bed, 1 x 2 bed) ● Lifts to all other levels ● Lift lobby A and B ● Fire stairs ● Corridors for accessing SOUs ● Garbage Chute adjacent to Tower A lifts

	• Communal area Parking - 75 Resident parking bays including 4 accessible (AS2890.6) Parking aisles Storage cages - 80
Level 4	**Communal Facilities** • Communal Room inc Accessible Toilet • Communal Open Space **Tower A** • 7 SOU (1 x 1 bed Livable, 2 x 1 bed, 3 x 2 bed and 1 x 3 bed) • Lifts to all other levels • Lift lobby A • Fire stairs • Corridors for accessing SOUs • Garbage Chute adjacent to Tower A lifts **Tower B** • 9 SOU (1 x 1 bed Livable, 2 x 1 bed and 6 x 2 bed) • Lifts to all other levels • Lift lobby B • Fire stairs • Corridors for accessing SOUs • Garbage Chute adjacent to Tower B lifts
Level 5	**Tower A** • 7 SOU (1 x 1 bed Livable - 501, 1 x 1 bed, 4 x 2 bed and 1 x 3 bed) • Lifts to all other levels • Lift lobby A • Fire stairs • Corridors for accessing SOUs • Garbage Chute adjacent to Tower A lifts **Tower B** • 10 SOU (1 x 1 bed Livable - 509, 2 x 1 bed, 5 x 2 bed and 2 x 2 bed Adaptable/Livable - 513/517) • Lifts to all other levels • Lift lobby B • Fire stairs • Corridors for accessing SOUs • Garbage Chute adjacent to Tower B lifts

Levels 6-21 (internal areas indicative of levels 6 to 21)	Tower A ● 7 Units (1 x 1 bed Livable - X01, 1 x 1 bed, 4 x 2 bed and 1 x 3 bed) ● Lifts to all other levels ● Lift lobby A ● Fire stairs ● Corridors for accessing SOUs ● Garbage Chute adjacent to Tower A lifts Tower B ● 10 Units (1 x 1 bed Adaptable/Livable - X09, 1 x 1 bed Livable - X11, 1 x 1 bed, 6 x 2 bed and 1 x 2 bed Adaptable/Livable - X13) ● Lifts to all other levels ● Lift lobby B ● Fire stairs ● Corridors for accessing SOUs ● Garbage Chute adjacent to Tower B lifts
Levels 22-23	Tower A ● 6 Units (1 x 1 bed Livable 2201/2301, 1 x 1 bed, 1 x 2 bed and 1 x 3 bed Adaptable/Livable 2206/2306), 2 x 3 bed ● Lifts to all other levels ● Lift lobby A ● Fire stairs ● Corridors for accessing SOUs ● Garbage Chute adjacent to Tower A lifts Tower B ● 9 Units (2 x 1 bed Livable 2207/2307 + 2209/2309, 1 x 1 bed, 5 x 2 bed and 1 x 2 bed Adaptable/Livable - 2211/2311) ● Lifts to all other levels ● Lift lobby B ● Fire stairs ● Corridors for accessing SOUs ● Garbage Chute adjacent to Tower B lifts
	Tower B ● 8 Units incl. 1 Livable Unit and 1 Adaptable

	• (2 x 1 bed Livable 2401 + 2403, 3 x 2 bed and 1 x 2 bed Adaptable/Livable - 2405, 1 x 3 bed Adaptable/Livable - 2406 and 1 x 3 bed) • Lifts to all other levels • Lift lobby B • Fire stairs • Corridors for accessing SOUs • Garbage Chute adjacent to Tower B lifts
Total Units	**373 Units**

1.6 Report Structure

The report consists of a Summary of Compliance Departures provided in the table under Section 2 below, which is for the reader's ease of reference and most urgent attention. Notwithstanding the summary of issues within **Section 2** must also be read in conjunction with the body of the assessment provided under **Section 3** of the report which further details compliance matters needing consideration in design development and during construction.

It is also the responsibility of all design consultants to ensure compliance with relevant NCC access requirements, DCP controls, Australian Standards and Manufacturers Specifications. This report does not in any way relieve design consultants from their obligations in designing to achieve compliance with the NCC. Furthermore, this report does not relieve the PCA from their statutory obligations required to assess the drawings in detail prior to the issue of a Construction Certificate.

2. Summary of Key Compliance Departures

The following comprises a summary of the key compliance issues identified under the Disability Access Assessment in Section 3 and is to be read in conjunction with the aforementioned Sections and the Building Code of Australia Volume 1.

The following matters are to be considered & addressed to the satisfaction of the Principal Certifying Authority as part of the Construction Certificate application.

Relevant BCA Clause	Element	Issue	Non-compliance / lack of detail
D3.1	Common courtyard - Level 4	Ongoing design detail	Ensure access is provided to all areas required to be accessible (as per landscape plans)
D3.1	Storage areas	Access	Storage lockers room for residents are provided throughout the on-site parking levels ● Management strategy to be provided at time of CC allocating storage units to people with disabilities ● Pathway to Bike storage is unclear ● Accessible path of travel from on-site accessible visitors car space and cafe entry
D3.2	External entry paths	Ongoing design detail	Ensure access is provided to all areas required to be accessible
D3.3	Landscaping	Ongoing design detail	Ensure access is provided to all areas required to be accessible (as per landscape plans)

3. Disability Access Assessment

Section of Report	Design Criteria
3.1	**Overview of Accessible building features** 3.1.1 Compliance with BCA Part D3 3.1.2 Compliance with AS4299 3.1.3 Compliance with SEPP 65 / Apartment Design Guide (ADG) Part 4Q
3.2	**BCA Part D3 – Access For People with Disabilities**
3.3	**AS4299 Adaptable Housing** - Class C Essential Features Note: All Adaptable units incorporate Livable Housing Silver Level Elements.
3.4	**Livable Housing Design (LHD) Guidelines** The LHD Guidelines aim to improve the level of accessibility and adaptability of new housing so that the housing can meet the needs of a wide range of occupants across time. The LHD Guidelines has 7 core design elements.

3.1 Overview of Accessible building features

3.1.1 Compliance with BCA Part D3

The proposed development, will satisfy the prescriptive deemed to satisfy provisions of Part D3, E3.6 and F2.4 of the BCA 2019, as follows:

1. Accessible pathways from Cowper and Good Street on the ground level to the principal entrances of the residential buildings.
2. Access to and within common areas such as communal open spaces for the residents and waste deposit areas on every level of each building.
3. Access to the entrance doorway of sole occupancy units, where there is a lift installed.

3.1.2 Compliance with AS4299 Adaptable Housing

It is noted that with the exception of two (2) units, all Adaptable units are located within Tower B.

It is my professional opinion that this development has the capacity to satisfy the following adaptable and visitable housing design requirements, as follows:

1. Drawings - 38 units to be adaptable in accordance with Class C AS4299 Adaptable Housing (1995), noting that the adaptable units have been designed to Silver Level of the LIvable Housing Design Guide.
2. Siting - the site has different RLs across the street frontages however accessible paths of travel from street frontages and car parking areas are provided to the two (2) residential lobbies, as well as access to and within common use facilities.
3. Security - potential for pathway lighting to be 50lx and safe vehicle drop off point.
4. Provision of letterboxes in a central position near each street entrance
5. Private Car Accommodation - Basement car parking provided for 38 of the 38 adaptable units
6. Accessible 850mm clear entry to the adaptable units.
7. Interior General - Minimum door width 820mm, internal corridors 1000mm.
8. Living room and dining room circulation space, GPO’s and telephone outlets.
9. Adaptable Kitchen
10. Main Bedroom circulation space and GPO’s
11. Bathroom
12. Toilet
13. Laundry
14. Door Locks 900 - 1100mm height
15. Non-slip floor coverings to outside paved areas.

Table of Adaptable / Visitable units (AS4299 Adaptable Housing)

Unit Type	Unit Numbers	No. of Bedrooms	No. of Units
A	609 to 1809	1	13
B	413 to 2113	2	18
B	2211 & 2311	2	2
B	2405	2	1
C	517	2	1
D	2206, 2306	3	2
E	2406	3	1
Total Number of Adaptable Units			**38**

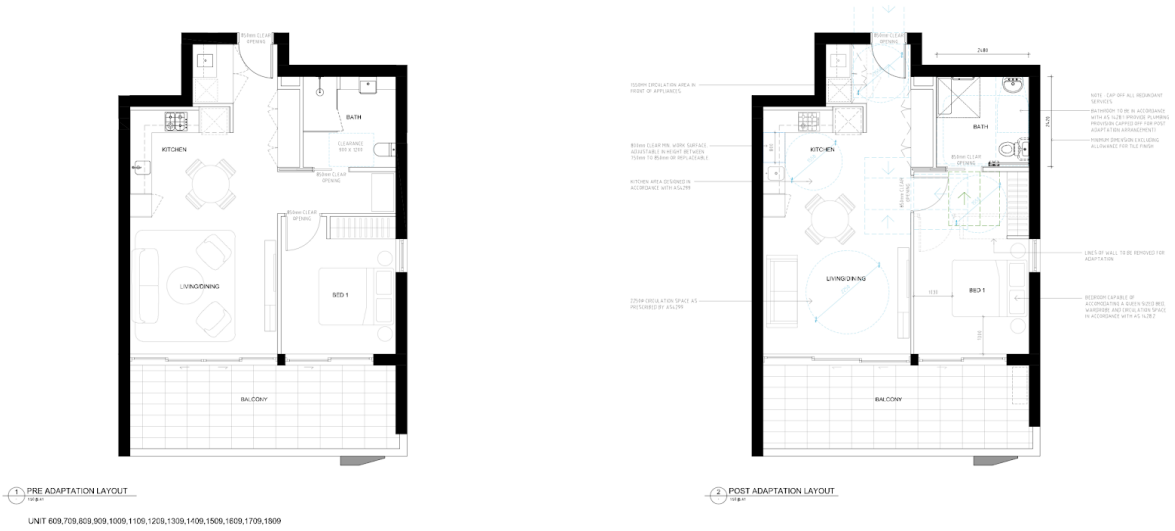

Figure 2 - Unit Type A - Adaptable 1 bed unit (13 Units - 609 to 1809)

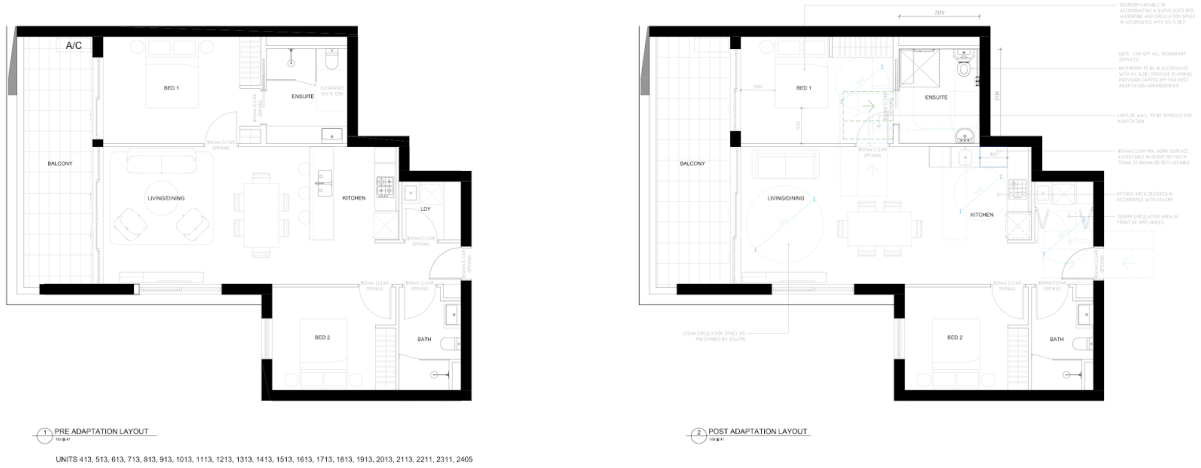

Figure 3 - Unit Type B- Adaptable 2 bed unit (21 Units 413 to 2113, 2211, 2311, 2405)

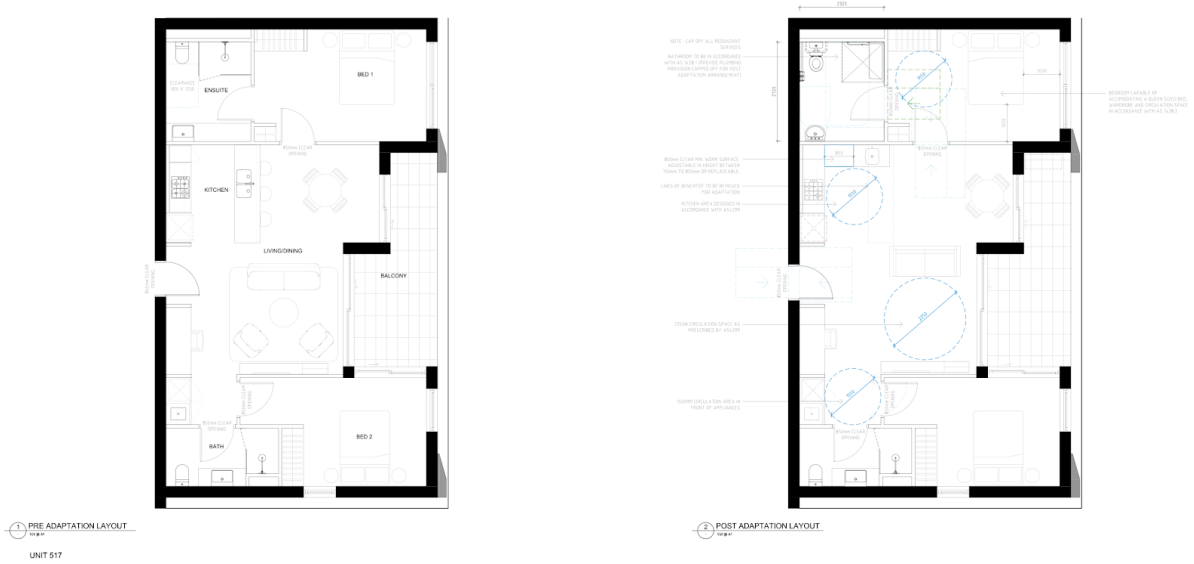

Figure 4 - Unit Type C - Adaptable 2 bed unit (1 Unit - 517)

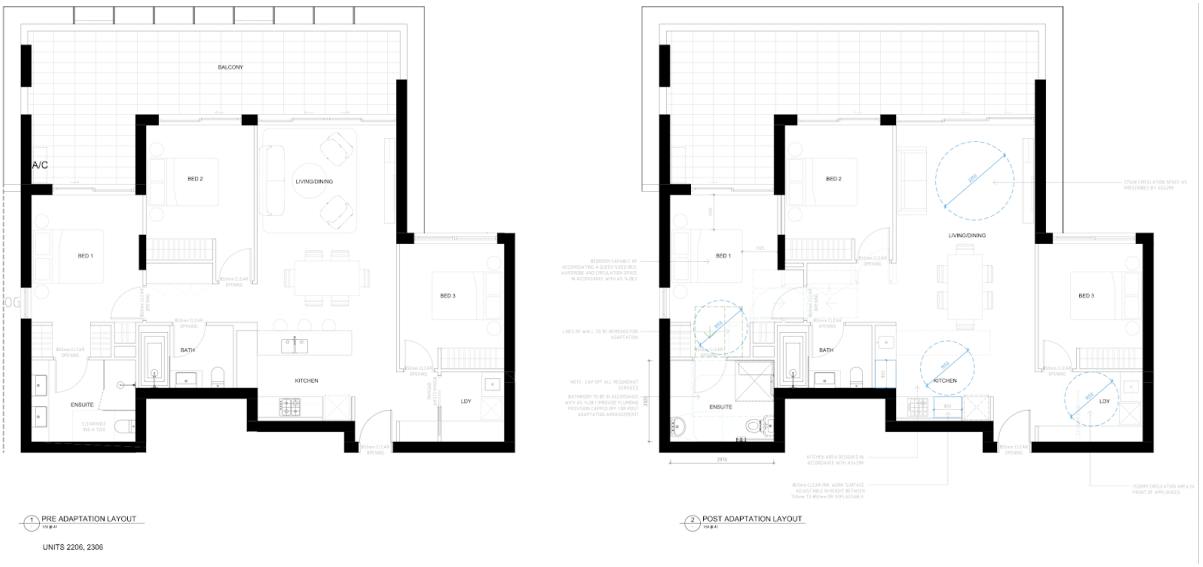

Figure 5 - Unit Type D - Adaptable 3 bed unit (2 Units - 2206 and 2306)

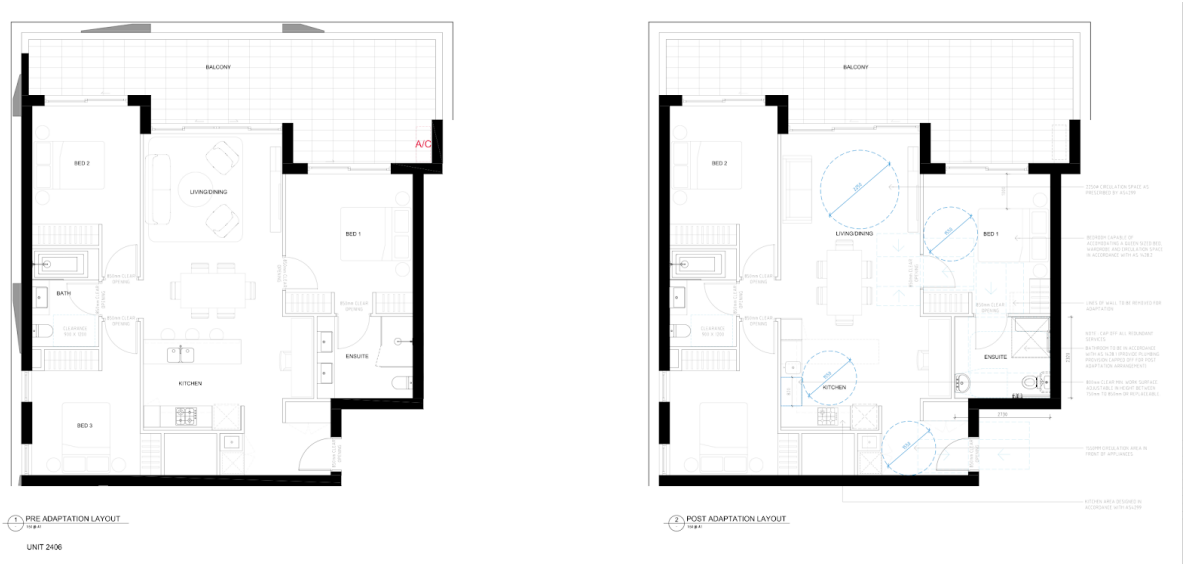

Figure 6 - Unit Type E - Adaptable 3 bed unit (1 Unit - 2406)

3.1.3 Compliance with SEPP 65 / Apartment Design Guide (ADG) Part 4Q

Livable Housing Design Guidelines (LHDG) universal design features are required for Class 2 buildings and applicable to the parts of the building class not covered by the Disability Standards and BCA 2019(Vol. 1 and 2).

The NSW ADG / SEPP65 is applicable for development applications lodged from 17th of July 2015 which requires a benchmark of 20% of units to be designed under the LHDG “silver level” universal design requirements.

A total of three hundred and seventy three (373) SOU's are proposed. 82 units are proposed to include LHDG requirements meeting compliance with the 20% benchmark according ADG / SEPP65.

45 of the 373 units will be purely designed in compliance with LHDG with the remaining 37 units complying with both LHDG and pre-adaptation Adaptable housing requirements.

Table of Visitable Units (LHDG Silver level) (in addition to the nominated adaptable units listed above which are visitable without adaptation)
It is noted that all Livable Units have 1 bedroom only.

Unit Number
401
409
501
509
601
611
701
711
801
811
901
911
1001
1011
1101
1111
1201
1211
1301
1311
1401
1411

1501
1511
1601
1611
1701
1711
1801
1811
1901
1909
1911
2001
2009
2011
2101
2109
2111
2201
2207
2301
2307
2401
2403

Livable Units	45 Units
Livable /Adaptable Units	38 Units
Total Livable	**83 Units**

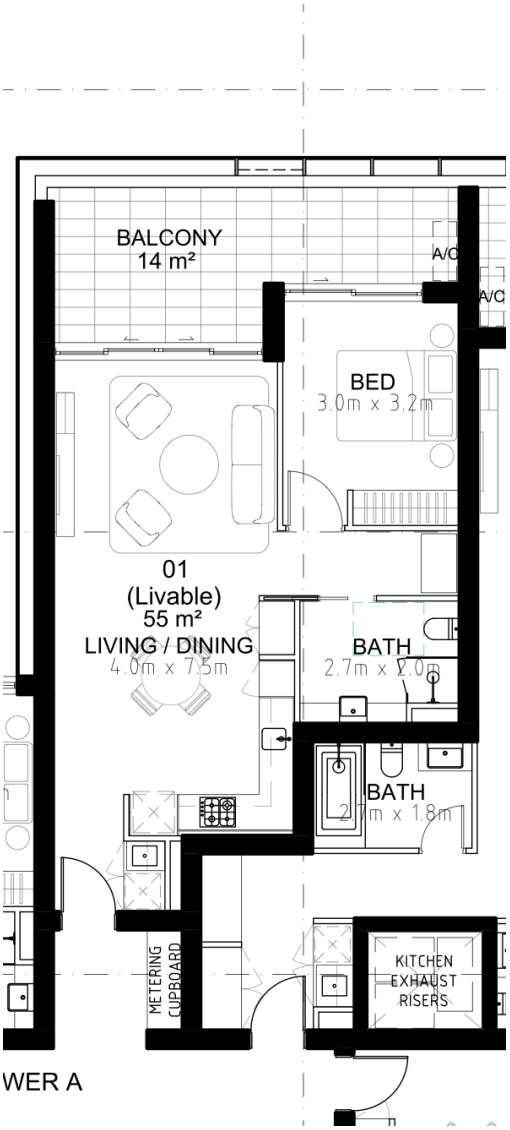

Figure 7 - Unit Type 01 - Livable Housing Silver Level - 1 bed

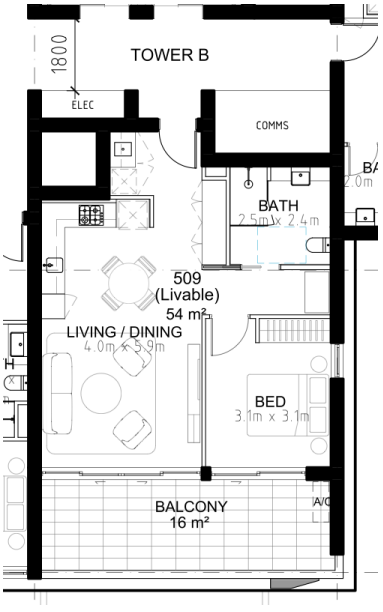

Figure 8 - Unit Type 02 - Livable Housing Silver Level - 1 bed

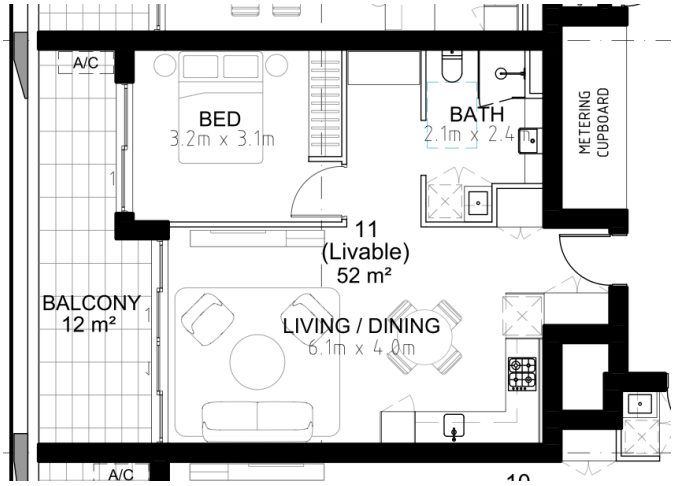

Figure 9 - Unit Type 03 - Livable Housing Silver Level - 1 bed

3.2. BCA Part D3 – Access For People with Disabilities

The following is a clause-by-clause assessment of the architectural drawings against BCA Part D3 – Access For People with a Disability. For more detail on each requirement, please refer to *Appendix B: BCA Part D3 – Access For People with a Disability.*

Deemed to Satisfy Provision	Complies	Comments
D3.1 General building access requirements Class 2 and 7a	✓	The drawings demonstrate access will be provided to the maximum extent possible to all areas on all levels of the residential parts of the development. Circulation spaces and passing spaces have been provided at the end of corridors and common area doorways to comply with AS1428.1 (2009). Compliant access pathways are provided to common areas such as: ❏ Level 4 common landscaped or open areas ❏ Level 4 Communal facilities ❏ Garbage Chute on each residential level of both buildings. ❏ Storage areas - where not directly associated with carparking spaces ❏ Accessible toilet in common area on level 4 ❏ Bike storage on the ground level of building

		<u>Recommended Action</u> During ongoing design and construction:: 1. Ensure external and internal pathways comply with AS1428.1 (2009), between finished surfaces. 2. At time of CC ensure common area doors and gates have compliance with AS1428.1 (2009) with respect to clear opening widths, luminance contrast on doors, door hardware, and door/gate force is 20N including where a door closer is fitted. 3. Provide slip resistance certification for common area paving, flooring, ramp surfaces and stairs, to show testing under wet surface conditions in accordance with AS4586 – 2013. 4. To meet the intent of the DDA, ensure that accessible communal area facilities are provided including: a. Seating b. Table seating - one table to have an area that has no built in seating so that the table can be approached and used by a person using a wheelchair c. Communal room to have one (1) height adjustable table
D3.1 General building access requirements Class 6 - Retail and Cafes		The drawings demonstrate access will be provided to the maximum extent possible to all retail areas of the development. Circulation spaces at the ends of corridors and passing spaces where there is not a direct line of sight have been provided in all corridors. It is also noted that doorways required to be accessible also have required circulation areas. All of these dimensions comply with AS1428.1 (2009). Accessible pedestrian links are unclear or not currently accessible for the following locations ● Retail garbage ● Bicycle storage to retail units ● Retail unit 7 from on-site accessible parking

		<u>Recommended Action</u> During ongoing design and construction:: 1. Ensure external and internal pathways comply with AS1428.1 (2009). 2. At time of CC ensure retail units and common area doors and gates have compliance with AS1428.1 (2009) with respect to clear opening widths, luminance contrast on doors, door hardware, and door force is 20N where a door closer is fitted. 3. Provide slip resistance certification for cafe flooring and common area paving, flooring, ramp surfaces and stairs, to show testing under wet surface conditions in accordance with AS4586 – 2013. 4. To meet the intent of the DDA, ensure that where cafe fitout is the responsibility of the base building construction team, accessible cafe facilities are provided including: a. A section of counter within cafes has a bench height that is accessible b. Seating c. Table seating - one table to have a height that enable it to be used by a person using a wheelchair
D3.2 Access to buildings	✓	The gradient of all the accessible pathways from the allotment boundary and connections to each area of building required to be accessible comply with AS1428.1 (2009). The following exceptions are noted as having unclear designated accessible pathways to all other parts of the building required to be accessible: ● Accessible visitor car parking bay on ground level Accessible on-site bicycle parking **Parking** On-site residential parking is provided on from basement level up to and including Level 3. ● Lift access is provided to all levels. ● One (1) accessible carparking space is

		provided for visitors on the ground level. ● Gradient levels in the car park provide an accessible path of travel to each tower lift lobby **Residential entry doors** Accessible pathways are proposed from the street frontage to both tower lobbies buildings. Each path is shown on the plans as having compliant width. Details provided for gradient and crossfall of pathways required to be accessible show compliance with AS1428.1-2009. **Retail** Each retail unit has an entry door at the front and rear of the premises. Doors into each retail unit are shown to have compliant approach, hinge and latch side circulation. Where double doors / gates are provided the width of the active leaf is not shown to have the minimum clear door opening width of 850mm. Some dimensional details are missing on plans for the rear accessible path of travel from the retail units to the onsite parking as well as the common area toilets. <u>Recommended Action</u> At time of Construction Certificate: 1. Ensure pathways comply with AS1428.1 (2009) including but not limited to: a. Sides of walkways and ramps have level abutment or barriers as required b. Gradients c. Crossfalls d. Handrails and kerbrails where required 2. Ensure during ongoing design and construction that all materials used on accessible paths of travel have slip resistance certifications for external and internal areas. To show testing under wet surface conditions as a pendulum classification (AS4586 – 2013)

		3. Ensure door and gates, where used, installation is in compliance with AS1428.1 (2009) with respect to clear openings 850mm, level circulation space, door force and luminance contrast of doors and gates for all entry and common areas on all levels. 4. Ensure thresholds of residential and retail entrances as well as common area doors and gates are level. 5. Ensure signage is installed at entrances that are not accessible with directional information to the location of the nearest accessible entrance in accordance with BCA 2019 Part D3.6 (e)
D3.3 Parts of building to be accessible	✓	The two residential buildings are built on a podium. The two towers contain a single residential corridor on levels 1 to 3. From Level 4 upwards, there is separate lift access to each section of that level. **Accessible walkways and ramps** A service corridor at the rear of retail units 2 to 5 also provides an accessible path of travel between the following elements ● Retail units ● Entry lobby A ● Common area toilets The section of corridor behind retail units 3 to 5 includes two graded walkway sections, which are shown on the plans to have a maximum gradient of 1:20. Landings are provided at the top and base. A midpoint landing includes the rear door into retail 4. The section of corridor behind retail unit 2 includes two 5600mm ramps, which are shown on the plans to have a maximum gradient of 1:14. Landings are provided at the top, midpoint and base. The ramps are shown to include access features including ● Continuous handrails on both sides ● Handrail extensions at the top and base ● TGSIs at the top and base (note TGSIs are not required at the midpoint landing as there are continuous handrails on both sides

		Corridor walls provide barriers on both sides of the ramps and graded walkways. <u>Recommended Action</u> Accessible pathways (including communal areas) to comply with AS1428.1-2009: ● Clause 6 - dimensions ● Clause 7 - slip resistance (AS/NZS 4586) ● Clause 7 - construction tolerances between abutment of surfaces ● Clause 10 - gradients, crossfalls and landings ● Clause 10 Ramp edging - kerb, kerb rail or other suitable ramp edging ● Clause 10 - handrails and handrails extensions ● Clause 11 - where there are stairs ● Clause 13 - where there are doors or gates **Stairs** Non-fire-isolated stairs are shown on the plans within retails units 1, 5 and 7. Stairs are also shown providing a connection between the service corridor and car park adjacent to the rear entry into Retail 3. All non-fire-isolated stairs are shown to have handrails on both sides, with handrail extensions at the top and base. Level landings are provided at the top and base of the non-fire-isolated stairs. The landing at the top has dimensions in accordance with the requirements of AS1428.1-2009 to provide door circulation. Tactile indicators are also shown at the top and base of each flight of non-fire-isolated stairs <u>Recommended Action</u> All non-fire-isolated stairs to comply with AS1428.1 Cl 11 Stairs (2009) with regards to ● Minimum width between handrails of 1000mm ● Handrails on both sides

		● Handrail heights to be 865mm to 1000mm above step nosing ● Handrail extensions at top and base ● Tactile indicators on top and bottom landing of steps ● Tactile indicators on mid point landings where handrails are not continuous on both sides of landing ● Single solid contrast strips to edge of stair nosings 50 - 75mm deep (30% contrast) **Stairs - fire-isolated** Stairs providing egress are shown on the plans within both buildings. <u>Recommended Action</u> Fire isolated stairs to have ● Single solid contrast strip to edge on stair nosings 50-75mm deep (30% contrast) to comply with AS1428.1 ● handrail at 865mm to 1000mm above step nosing on at least one side of the stairs to comply with AS1428.1 (2009) ● Handrail extensions at landings where the handrail is not continuous ● Handrails to have no vertical sections **Lifts** Buildings A and B each contain two lifts providing access from the basement level up to the highest residential entrance level. <u>Recommended Action</u> At time of Construction Certificate, ensure compliance with accessible features of AS1735.12 as required by Table E3.6b BCA. **Turning spaces** At the end of corridors there is a turning space of at least 1540mm x 2070mm to comply with AS1428.1 (2009) shown on the plans. <u>Recommended Action</u>

		At time of Construction Certificate, ensure turning areas are provided: ● At end of all corridors or within 2 metres of the end of corridors ● In common area rooms. **Garbage Chutes** Garbage Chutes are located adjacent to the lift lobby on all residential levels of each building. Garbage Chutes are not located within a room that requires the person to enter the space. The dimensions of the area in front of the chutes is suitable for a person using a wheelchair make a 180 degree turn when exiting the garbage area. <u>Recommended Action</u> Garbage Chutes to be designed so that a person using a wheelchair can access the chute. 1550mm in front of chute Ensure garbage chutes access doors to be designed so that a person using a wheelchair can access the chute i.e. the handle to be located more than 500mm from an internal corner.
D3.4 Exemptions	✓	All service areas for this development are deemed exempt due to the nature of the work required to be performed in these areas. This includes ● Pump rooms ● Service areas ● Fire control rooms ● Loading docks ● Plant areas ● Rooftops non-residential
D3.5 Car parking spaces for people with a disability	✓	There are no requirements for accessible parking for a Class 2 building. However requirements of the Parramatta DCP include parking for residents and visitors *Visitor Parking* One (1) accessible car parking space is shown on the plans on the ground level car parking area for visitors.

		It is noted that the shared zone for this parking space has a column within an area that is required to be kept clear for circulation. *Resident Parking* 38 car parking spaces have been allocated to Adaptable units. These are positioned throughout the carparking levels. Plans show car parking bays allocated to the adaptable units are all accessible car parking bays with one exception. These carparking spaces comply with the requirements of AS2890.6 Parking Facilities - off street parking for people with disabilities. One car parking bay is shown on the basement level to have dimensions in accordance with the requirements of AS4299 Adaptable Housing *Retail parking* One (1) accessible car parking space has been allocated to the retail units. <u>Recommended Action</u> Ensure at the time of Construction Certificate parking is: ● Provided for each Adaptable Unit ● Provided at the correct rate for retail units ● Ensure that no structural or mechanical duct services are installed above the adaptable car park space or accessible car parking spaces to maintain a clear head height of 2500mm at the bay ● Provided for visitor parking at required rates ● Parking bays to be in accordance with either AS2890.6 or AS4299 including: ○ Bay dimensions ○ Shared zones (accessible only) ○ 2500mm Overhead clearance (ensure that no structural or mechanical duct services are installed above the accessible car spaces to maintain a clear head height of 2500mm)

		■ At bay - 2500mm ■ On path to bay - 2200mm ○ Markings as required ● Shared zones to have bollards in accordance with AS2890.6 ● Shared zones to have no other intrusions (ie columns) ● Located on an accessible path of travel ● Consider providing parking for adaptable units in close proximity to the lifts of each building relative to the number of adaptable units within each building ○ Tower A = 2 ○ Tower B = 35
D3.6 Signage	**X**	At this stage of the design signage is not required to be developed. <u>Recommended Action</u> At time of Construction Certificate, accessible signage in accordance with BCA2019and AS1428.1-2009 will be required. 1. Required exit doors stating 'Exit' and 'Level' followed by floor number. 2. Common area accessible sanitary facilities Ensure signage is provided at required locations directing people with disabilities to accessible entrances - stairs to podium level
D3.7 Hearing augmentation	✓	At this stage of the design hearing augmentation is not required to be developed. <u>Recommended Action</u> At time of Construction Certificate, hearing augmentation in accordance with BCA2019 and AS1428.5 is provided as required in the Communal Room on level 4
D3.8 Tactile indicators	✓	Tactile indicators or TGSIs are shown on the plans for the following locations on the ground level common areas: ● Ramps on path to accessible toilet

		• Stair connection to service corridor and car park TGSIs are also shown on the ground level drawings on the short flights of stairs within retails units 1, 5 and 7. TGSIs are not required and not shown on the numerous fire stairs. <u>Recommended Action</u> Tactile indicators to: • be installed on the top and bottom of non-fire isolated stairs and ramps to comply with AS1428.4.1. • meet luminance contrast requirements of AS1428.4.1 • meet slip resistance requirements of AS/NZS 4586 To enable detection of TGSIs by a person using a long cane ensure that the TGSIs are: • installed on relatively smooth surfaces • surfaces within 1000mm of warning TGSIs (on the side away from the hazard being identified) are relatively smooth • surfaces within 1000mm of directional TGSIs are relatively smooth
D3.12 Glazing on an accessway	✓	Visual barriers on glazing details are not required to be developed at this stage of design <u>Recommended Action</u> Ensure that at time of Construction Certificate, on all glazed doors and glazed panels that form part of an accessible path of travel, provide a solid contrast line 75mm width at 900 - 1000mm and 30% luminance contrast when viewed against the floor surface or surfaces within 2m of the glazing on the opposite side
E3.6 Passenger lifts	✓	**Lift** Passenger lifts are proposed within each residential tower, to provide access to all levels of the residential

		parts of this development. <u>Recommended Action</u> The lifts require accessible features to be in accordance with E3.6b BCA 2019 Lift dimensions to comply with BCA and AS1735.12 To be assessed at Construction Certificate.
F2.4 Accessible sanitary facilities	✓	Common area accessible toilet facilities are shown on the plans on the ground level as well as within the community room on level 4. Ground level facilities plans also ambulant cubicles within the male and female toilets. <u>Recommended Actions</u> Construction certificate drawings to detail compliant circulation for accessible bathroom elements with dimensions between finished surfaces. Fittings and fixture to be in accordance with the requirements of AS1428.1-2009 as listed in Appendix C of this report

3.3. AS4299: Adaptable House Class C Features

The checklist contained in Appendix D is a clause-by-clause assessment of the five (5) layouts detailed by the architectural drawings against AS4299 Adaptable House Class C. This classification level is achieved by incorporating all of the essential features for adaptable housing. This table includes information on the schedule of features, which is in accordance with AS 4299 - Schedule of Features for Adaptable Housing.

3.4 Livable Housing Design (LHD) Guidelines

The LHD Guidelines aim to improve the level of accessibility and adaptability of new housing so that the housing can meet the needs of a wide range of occupants across time. The LHD Guidelines has 7 core design elements to meet Silver level compliance, the core performance statement for each is outlined below:

1. Dwelling access - There is at least one level step free entrance into the dwelling to enable home occupants to easily enter and exit the dwelling
2. Dwelling entrance - There is a safe, continuous pathway from the street entrance and/or parking area to a dwelling entrance that is level
3. Internal doors and corridors - Internal doors and corridors facilitate comfortable and unimpeded movements between spaces
4. Toilet - The ground (or entry) level has a toilet to support easy access for home occupants and visitors
5. Shower - The bathroom and shower is designed for easy and independent access for all home occupants.
6. Reinforcement of bathroom and toilet walls - The bathroom and toilet walls are built to enable grab rails to be safely and economically installed at a future date
7. Internal stairways - Where installed, stairways are designed to reduce the likelihood of injury and also enable future adaptation

(http://www.livablehousingaustralia.org.au).

This confirms compliance with SEPP 65 Part 4Q - 20% of units to meet Silver level LHDG.

4. Conclusion

On the basis of our assessment, we confirm that the Development Application plans for the Gran Central development have the capacity to meet:

1. Performance Requirements of the Disability (Access to Premises-Buildings) Standards 2010 and Part D3, E3.6, F2.4 of the Building Code of Australia (BCA) 2019 through the deemed-to-satisfy provisions.
2. 10% of all dwellings to meet Class C essential AS4299 Adaptable Housing (1995)
3. 10% of all dwellings must be designed to achieve the Silver Standards of the Livable Housing Design Guideline (Livable Housing Australia 2015)

We note some further assessment at Construction Certificate stage is required to ensure adequate access compliance as highlighted in the table below.

Item	Recommended Action
1	Accessible paths of travel are provided to all facilities required to be accessible
2	External accessible pathways to comply with AS1428.1-2009: • Clause 6 - dimensions - width and turning areas

	● Clause 7 - construction tolerances between abutment of surfaces, in particular to the communal open space ● Clause 7 - cover strips at floor surface joints ● Clause 10 - gradients and crossfalls ● Clause 10 - surface abutment ● Clause 10 - ramp edging
3	All internal accessible paths of travel, including to and within common area facilities as well as retail and cafe areas, to comply with AS1428.1 (2009) (as listed above) for: ● Width ● Gradient ● Crossfall ● Turning spaces ● Construction tolerances between different surfaces on an accessible path of travel
4	Doors and gates on all accessible paths of travel to have compliance with AS1428.1 (2009) with respect to: ● Minimum clear openings, ● Level circulation space (gradient no greater than 1:40) ● luminance contrast on doorway elements, ● door force is 20N including where a door closer is fitted ● Level threshold
5	Visual indicators on glazing to comply with AS1428.1-2009 including ● be 50 - 75mm wide on all glazed windows and doors ● solid ● luminance contrast of minimum 30% from when viewed against the floor surface ● at a height 900-1000mm.
6	All ramps (including step and threshold ramps) to comply with AS1428.1 including but not limited to: ● Handrails on both sides with compliant diameter on ramps ● Handrail extensions on ramps ● Handrail extension returns on ramps ● Kerbrails or other suitable barrier ● Maximum distance between landings to be no greater than 9 meters ● Tactile ground surface indicators, where required
7	All non-fire-isolated stairs to comply with AS1428.1 Cl 11 Stairs (2009) with regards to ● Minimum width of 1000mm ● Handrails on both sides ● Handrail heights to be 865mm to 1000mm above step nosing

	● Handrail extensions at top and base ● Tactile indicators on top and bottom landing of steps
8	Fire isolated stairs to have ● contrast strip to edge on stair nosings 50-75mm deep (30% contrast) to comply with AS1428.1 ● handrail at 865mm to 1000mm above step nosing on at least one side of the stairs to comply with AS1428.1 (2009)
9	Lifts to have dimensions and accessible features in accordance with E3.6b BCA 2019 ● Design and fittings in accordance with AS1735 including: ○ Lighting ○ Control buttons - lift landing ○ Control buttons - lift car ○ Audible information ○ Emergency hands free communication ○ Passenger protection system ○ Handrail
10	Parking to be in accordance with either AS2890.6 or AS4299 including: ● Required number of accessible parking bays for ○ Visitors ○ Retail ○ Adaptable units ● Bay dimensions ● Shared zones (accessible parking bays only) ● Overhead clearance (note these clearance requirements includes ceiling or overhead services such as electrical cabling, plumbing and fire services/sprinklers) ○ At bay - 2500mm ○ On path to bay - 2200mm ● Markings as required ● Shared zones to have no other elements than the bollards in accordance with AS2890.6 ● Located on an accessible path of travel
11	Accessible signage to be provided in accordance with BCA2019 and AS1428.1-2009 for: 1. Required exit doors stating ‘Exit’ and ‘Level’ followed by floor number. 2. Common area accessible sanitary facilities

12	Tactile indicators to: ● be installed on the top and bottom of non-fire isolated stairs and ramps to comply with AS1428.4.1. ● meet luminance contrast requirements of AS1428.4.1 ● meet slip resistance requirements of AS/NZS 4586
13	Adaptable unit letterboxes to be centrally located near the street entrance (AS4299 Cl 3.8)
14	Adaptable unit door hardware (AS4299 Cl 4.3.4)
15	Adaptable unit kitchen (AS4299 Cl 4.5)
16	Adaptable unit bathroom (AS4299 Cl 4.4)
17	Slip resistant floor surface in adaptable unit kitchen, bathroom and laundry and balcony as per AS/NZS4586
18	Livable Housing to comply with Silver level of Livable Housing Design Guidelines
19	Fixtures and fittings and layout of communal area accessible toilet and ambulant cubicles to comply with AS1428.1 (2009) (See Appendix C for details)
20	For all pedestrian pathways and internal flooring: 1. **Provide Slip resistance certificates for paving and floor surfaces which are on an accessible path of travel or in areas required to be accessible (Adaptable Units and Livable Housing Units) -** As per Table 3B, HB198:2014 - Wet pendulum test or Oil-wet inclining platform classifications for applications where NCC does not require slip resistance, as detailed below. a. **External footpaths and walkways no steeper than 1:14** Wet Pendulum P4 or Oil-wet platform test R11 b. **Entries to lift lobby (Transitional areas)** Wet Pendulum P2 or Oil-wet platform test R9 c. **Cafe and food service areas:** Wet Pendulum P3 or Oil-wet platform test R10 d. **Toilet facilities** Wet Pendulum P3 or Oil-wet platform test R10 e. **Kitchen areas** Wet Pendulum P3 or Oil-wet platform test R10

	f. TGSIs (NCC requirement Table D2.14) Wet Pendulum P4 or Oil-wet platform test R11 **g. Step nosings** (NCC requirement Table D2.14) Wet Pendulum P4
21	Luminance contrast testing prior to issuing of Occupation Certificate a. In situ measurement of luminance contrast between the TGSI's and the substrate or pavement on which they are installed b. In situ measurement of at least 30% luminance contrast between the Stair nosing and the surrounding pavement c. In situ measurement of at least 30% luminance contrast between the visual barriers and the pavement & flooring within 2 metres of the glazed panel or door d. In situ measurement of at least 30% luminance contrast between Door elements (AS1428.1 - 2009 Clause 13)
22	Common area and adaptable unit carpeted flooring: ● Meets the Access to Premises Standard and the BCA Part D3.3 (g) and (h) for pile height. ● Edge cover strips to comply with AS1428.1-2009 Clause 7
23	Pedestrian building access controls and internal security controls for area on accessible paths of travel to be located in accordance with AS1428.1-2009
24	Ensure signage is installed at entrances that are not accessible with directional information to the location of the nearest accessible entrance in accordance with BCA 2019Part D3.6 (e)
25	Garbage chutes to have doors that enable a person using a wheelchair to access the chute.
26	To meet the intent of the DDA: ● accessible communal area facilities are provided ● Internal areas of the cafe have sufficient size to contain furniture and provide accessible walkways between items of furniture ● Section of cafe service counter is provided at an accessible height in accordance with the requirements of AS1428.2

Statement of Qualifications

I certify that I am an appropriately qualified and competent person practising in the relevant area of work. I have recognised relevant experience in the area of work assessing disability access compliance and hold appropriately current insurance policies. (My qualifications and accreditations are listed below)

Full Name	Jane Bryce
Company	Cheung Access Pty Ltd
Address	GPO Box 1380 Sydney NSW 2001
Qualifications and Accreditations	1. Diploma of Arts (Habilitation Studies – Orientation & Mobility) 2. Grad Dip Rehabilitation Counselling 3. Cert IV Workplace Assessment and Training 4. Cert IV Access Consulting 5. Accredited with the Association of Consultants in Access, Australia Member No. 200 ACAA ACCREDITED MEMBER Jane Bryce: 200
Signature	
Date	4 November 2019

Appendix A: Report Documentation Relied Upon

The following documentation has been reviewed, referenced and/or relied upon in the preparation of this report:

- ❏ National Construction Code Series – Volume 1 of the Building Code of Australia 2019 (BCA)
- ❏ National Construction Code Series – Guide to the Building Code of Australia 2016
- ❏ Access to Premises - Building Standards 2010
- ❏ SEPP 65 & Apartment Design Guide Part 4Q-1 Universal Design - 20% of the total apartments incorporating the Livable Housing Design Guidelines silver level universal design features
- ❏ AS4299 Adaptable Housing (1995) - 10% of all dwellings to meet Class C (essential)
- ❏ Architectural drawings and documentation, provided by PBD Architects as detailed below:h

Dwg No	Dwg Title	Revision
DA 000	Cover Page	A
DA 001	Area Schedule	A
DA 002	Project Summary	A
DA 004	Demolition Plan	A
DA 100	Site Plan	A
DA 101	Basement Plan	A
DA 102	Ground Floor Plan	A
DA 103	Level 1 Plan	A
DA 104	Level 2 Plan	A
DA 105	Level 3 Plan	A
DA 106	Level 4 Plan	A
DA 107	Level 5 Plan	A
DA 108	Level 6 - 21 Plan	A
DA 109	Level 22 - 23 Plan	A
DA 110	Level 24 Plan	A
DA 111	Roof Plan	A
DA 201	North Elevation	A
DA 202	East Elevation	A
DA 203	South Elevation	A
DA 204	West Elevation	A
DA 301	Section A	A
DA 302	Section B	A

DA 303	Driveway Section	A
DA 311	Facade Section 1	A
DA 312	Facade Section 2	A
DA 313	Facade Section 3	A
DA 314	Facade Section 4	A
DA 315	Facade Section 5	A
DA 316	Facade Section 6	A
DA 401	Material Schedule	A
DA 402	Photomontage	A
DA 403	Photomontage	A
DA 404	Photomontage	A
DA 405	Photomontage	A
DA 406	Photomontage	A
DA 407	Photomontage	A
DA 501	GFA Diagram	A
DA 502	GFA Diagram	A
DA 510	Apartment Mix	A
DA 511	Apartment Mix	A
DA 520	Storage Diagram	A
DA 521	Storage Diagram	A
DA 530	Private Open Space	A
DA 531	Private Open Space	A
DA 540	Communal Open Space	A
DA 541	*Communal Open Space*	no file
DA 550	Cross Ventilation Diagram	A
DA 551	Cross Ventilation Diagram	A
DA 560	*VPA Diagram*	A
DA 601	Solar Study (21st June 9am-12pm)	A
DA 602	Solar Study (21st June 1pm-3pm)	A
DA 603	Solar Study (Summary)	A
DA 610	Shadow Diagram (21st June 9am-12pm)	A
DA 611	Shadow Diagram (21st June 1pm-3pm)	A
DA 620	Height Plane Diagram	A
DA 701	Adaptable Unit Type A	A
DA 702	Adaptable Unit Type B	A

DA 703	Adaptable Unit Type C	A
DA 704	Adaptable Unit Type D	A
DA 705	Adaptable Unit Type E	A

- ❏ drawings and documentation, provided by the Landscape Architects as detailed below

Dwg No	Dwg title	Revision
000	Landscape Coversheet	D
101	Landscape Plan Ground Floor	D
102	Landscape Plan Level 4	D
501	Landscape Details	A
502	Landscape Details	A

Appendix B: BCA Part D3 - Access for People with a Disability

Below is a list of Building Code of Australia (BCA) Part D3 requirements relating to access requirements for people with a disability in Class 2 Buildings.

Clause	Requirements
D3.1 General building access requirements Class 2	*Common Areas* From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level. To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed— (a) to the entrance doorway of each sole-occupancy unit; and (b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp.
D3.1 General building access requirements Class 6	To and within all areas normally used by the occupants
D3.1 General building access requirements Class 7a	To and within any level containing accessible carparking spaces.
D3.2 Access to buildings	(a) An accessway must be provided to a building required to be accessible— (i) from the main points of a pedestrian entry at the allotment boundary; and (ii) from another accessible building connected by a pedestrian link; and (iii) from any required accessible carparking space on the allotment. (b) In a building required to be accessible, an accessway must be provided through the principal pedestrian entrance, and— (i) through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and (ii) in a building with a total floor area more than 500 m2 , a pedestrian entrance which is not accessible must not be located more than 50 m from an accessible

	pedestrian entrance, except for pedestrian entrances serving only areas exempted by D3.4. (c) Where a pedestrian entrance required to be accessible has multiple doorways— (i) if the pedestrian entrance consists of not more than 3 doorways — not less than 1 of those doorways must be accessible; and (ii) if a pedestrian entrance consists of more than 3 doorways — not less than 50% of those doorways must be accessible. (d) For the purposes of (c)— (i) an accessible pedestrian entrance with multiple doorways is considered to be one pedestrian entrance where— (A) all doorways serve the same part or parts of the building; and (B) the distance between each doorway is not more than the width of the widest doorway at that pedestrian entrance (see Figure D3.2); and (ii) a doorway is considered to be the clear, unobstructed opening created by the opening of one or more door leaves (see Figure D3.2). (e) Where a doorway on an accessway has multiple leaves, (except an automatic opening door) one of those leaves must have a clear opening width of not less than 850 mm in accordance with AS 1428.1.
D3.3 Parts of building to be accessible	In a building required to be accessible— (a) every ramp and stairway, except for ramps and stairways in areas exempted by D3.4, must comply with— (i) for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and (ii) for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1; and (iii) for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1; and (b) every passenger lift must comply with E3.6; and (c) accessways must have— (i) passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an accessway where a direct line of sight is not available; and (ii) turning spaces complying with AS 1428.1—

	(A) within 2 m of the end of accessways where it is not possible to continue travelling along the accessway; and (B) at maximum 20 m intervals along the accessway; and (d) an intersection of accessways satisfies the spatial requirements for a passing and turning space; and (e) a passing space may serve as a turning space; and (f) a ramp complying with AS 1428.1 or a passenger lift need not be provided to serve a storey or level other than the entrance storey in a Class 5, 6, 7b or 8 building— (i) containing not more than 3 storeys; and (ii) with a floor area for each storey, excluding the entrance storey, of not more than 200 m2 ; and (g) clause 7.4.1(a) of AS 1428.1 does not apply and is replaced with 'the pile height or pile thickness shall not exceed 11 mm and the carpet backing thickness shall not exceed 4 mm'; and (h) the carpet pile height or pile thickness dimension, carpet backing thickness dimension and their combined dimension shown in Figure 8 of AS 1428.1 do not apply and are replaced with 11 mm, 4 mm and 15 mm respectively.
D3.4 Exemptions	The following areas are not required to be accessible: (a) An area where access would be inappropriate because of the particular purpose for which the area is used. (b) An area that would pose a health or safety risk for people with a disability. (c) Any path of travel providing access only to an area exempted by (a) or (b).
D3.5 Car parking spaces for people with a disability	Accessible carparking spaces— (a) subject to (b), must be provided in accordance with Table D3.5 in— (i) a Class 7a building required to be accessible; and (ii) a carparking area on the same allotment as a building required to be accessible; and (b) need not be provided in a Class 7a building or a carparking area where a parking service is provided and direct access to any of the carparking spaces is not available to the public; and (c) subject to (d), must comply with AS/NZS 2890.6; and (d) need not be designated where there is a total of not more

	than 5 carparking spaces, so as to restrict the use of the carparking space only for people with a disability.
D3.6 Signage	In a building required to be accessible— (a) braille and tactile signage complying with Specification D3.6 must— (i) incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 and identify each— (A) sanitary facility, except a sanitary facility within a sole-occupancy unit in a Class 1b or Class 3 building; and (B) space with a hearing augmentation system; and (ii) identify each door required by E4.5 to be provided with an exit sign and state— (A) "Exit"; and (B) "Level" ; and either (aa) the floor level number; or (bb) a floor level descriptor; or (cc) a combination of (aa) and (bb); and (b) signage including the international symbol for deafness in accordance with AS 1428.1 must be provided within a room containing a hearing augmentation system identifying— (i) the type of hearing augmentation; and (ii) the area covered within the room; and (iii) if receivers are being used and where the receivers can be obtained; and (c) signage in accordance with AS 1428.1 must be provided for accessible unisex sanitary facilities to identify if the facility is suitable for left or right handed use; and (d) signage to identify an ambulant accessible sanitary facility in accordance with AS 1428.1 must be located on the door of the facility; and (e) where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access, in accordance with AS 1428.1 must be provided to direct a person to the location of the nearest accessible pedestrian entrance; and (f) where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must be placed at the location of the sanitary facilities that are not accessible, to direct a

	person to the location of the nearest accessible unisex sanitary facility.
D3.7 Hearing augmentation	(a) A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed— (i) in a room in a Class 9b building; or (ii) in an auditorium, conference room, meeting room or room for judicatory purposes; or (iii) at any ticket office, teller's booth, reception area or the like, where the public is screened from the service provider. (b) If a hearing augmentation system required by (a) is— (i) an induction loop, it must be provided to not less than 80% of the floor area of the room or space served by the inbuilt amplification system; or (ii) a system requiring the use of receivers or the like, it must be available to not less than 95% of the floor area of the room or space served by the inbuilt amplification system, and the number of receivers provided must not be less than— (A) if the room or space accommodates up to 500 persons, 1 receiver for every 25 persons or part thereof, or 2 receivers, whichever is the greater; and (B) if the room or space accommodates more than 500 persons but not more than 1000 persons, 20 receivers plus 1 receiver for every 33 persons or part thereof in excess of 500 persons; and (C) if the room or space accommodates more than 1000 persons but not more than 2000 persons, 35 receivers plus 1 receiver for every 50 persons or part thereof in excess of 1000 persons; and (D) if the room or space accommodates more than 2000 persons, 55 receivers plus 1 receiver for every 100 persons or part thereof in excess of 2000 persons. (c) The number of persons accommodated in the room or space served by an inbuilt amplification system must be calculated according to D1.13. (d) Any screen or scoreboard associated with a Class 9b building and capable of displaying public announcements must be capable of supplementing any public address system, other than a public address system used for emergency warning purposes only.

D3.8 Tactile indicators	(a) For a building required to be accessible, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching— (i) a stairway, other than a fire-isolated stairway; and (ii) an escalator; and (iii) a passenger conveyor or moving walk; and (iv) a ramp other than a fire-isolated ramp, step ramp, kerb ramp or swimming pool ramp; and (v) in the absence of a suitable barrier— (A) an overhead obstruction less than 2 m above floor level, other than a doorway; and (B) an accessway meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D3.4, if there is no kerb or kerb ramp at that point, except for areas exempted by D3.4. (b) Tactile ground surface indicators required by (a) must comply with sections 1 and 2 of AS/NZS 1428.4.1. (c) A hostel for the aged, nursing home for the aged, a residential aged care building Class 3 accommodation for the aged, Class 9a health-care building or a Class 9c building need not comply with (a)(i) and (iv) if handrails incorporating a raised dome button in accordance with the requirements for stairway handrails in AS 1428.1 are provided to warn people who are blind or have a vision impairment that they are approaching a stairway or ramp.
D3.12 Glazing on an accessway	On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening must be clearly marked in accordance with AS1428.1.
E3.6 Passenger lifts	In an accessible building, every passenger lift must— (a) be one of the types identified in Table E3.6a, subject to the limitations on use specified in the Table; and (b) have accessible features in accordance with Table E3.6b; and (c) not rely on a constant pressure device for its operation if the lift car is fully enclosed.

F2.4 Accessible sanitary facilities	In a building required to be accessible— *SA F2.4(a)* (a) accessible unisex sanitary compartments must be provided in accessible parts of the building in accordance with Table F2.4(a); and *SA F2.4(b)* (b) accessible unisex showers must be provided in accordance with Table F2.4(b); and (c) at each bank of toilets where there is one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females; and (d) an accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary towels; and (e) the circulation spaces, fixtures and fittings of all accessible sanitary facilities provided in accordance with Table F2.4(a) and Table F2.4(b) must comply with the requirements of AS 1428.1; and (f) an accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and (g) where two or more of each type of accessible unisex sanitary facility are provided, the number of left and right handed mirror image facilities must be provided as evenly as possible; and (h) where male sanitary facilities are provided at a separate location to female sanitary facilities, accessible unisex sanitary facilities are only required at one of those locations; and (i) an accessible unisex sanitary compartment or an accessible unisex shower need not be provided on a storey or level that is not required by D3.3(f) to be provided with a passenger lift or ramp complying with AS 1428.1.

Appendix C: Accessible sanitary facility compliance requirements - detail

- Ensure during ongoing design and construction that
  - Combined accessible shower and WC sanitary facilities meet the circulation spaces of AS1428.1-2009
- Provision of required fittings for accessible sanitary facilities in accordance with requirements of AS1428.1-2009 including:
  - i) *Door hardware (AS1428.1-2009; Clause 13.5)*
    - (1) Door privacy snib with 45mm “handle” measured from centre of spindle
    - (2) Door handles to be
      - (a) preferred D-type if lever style handle provided on hinged doors
      - (b) 35 to 45 mm clearance between handle and door surface
      - (c) 20mm return on handle to enable operation by one hand
      - (d) installed at 1000mm +/- 10mm above finished floor level (AFFL)
    - (3) Door operating forces not to exceed 20 N
  - ii) *Toilet pan (AS1428.1-2009 Clause 15.2.2)*
    - (1) Top of seat to be 460mm to 480mm AFFL
    - (2) Centre line of pan to adjacent wall to be 450mm to 460mm
    - (3) Front of pan to be 800mm +/- 10mm from finished wall behind toilet
  - iii) *Toilet seat (AS1428.1-2009; Clause 15.2.3)*
    - (1) Provide minimum 30 % luminance contrast with its setting
  - iv) *Toilet backrest (AS1428.1-2009; Clause 15.2.4)*
  - v) *Toilet paper dispenser (AS1428.1-2009; Clause 15.2.6)*
    - (1) To be installed so that it does not block access to grabrail or create an impingement risk
    - (2) Outlet to be 300mm maximum from front of pan and no higher than 700mm above finished floor level (AS1428.1:2009 Figure 41)
    - (3) Dispenser not to intrude into required toilet pan circulation
  - vi) *Grabrails (AS1428.1-2009; Clause 15.2.7 and figure 42)*
    - (1) Ensure toilet grabrails are installed in accordance with Clause 15.2.7 and Figure 42
    - (2) Ensure grabrails for shower are installed in accordance with AS1428.1:2009 Clause 15.5.4 and figures 47 and 48 including vertical shower head support grabrail
  - vii) *Baby change tables AS1428.1-2009, Clause 15.2.8.2)*
    - (1) Ensure baby change table when in the folded position does not protrude into any other bathroom fitting circulation space
    - (2) Maximum operable height of top of table is 820mm
    - (3) Minimum under table clearance is 720mm
    - (4) Does not block installation of other bathroom fittings such as coat hooks
  - viii) *Mirror (AS1428.1-2009, Clause 15.4.2)*
    - (1) Vertical mirror to be installed above basin measuring
      - (a) 350mm wide
      - (b) Base of mirror to be located no more than 900mm AFFL
      - (c) Upper edge of mirror to be no less than 1850mm AFFL

ix) *Washbasin shelf (AS1428.1-2009, Clause 15.4.2)*
   (1) As a part of a vanity unit – 120mm wide by 300mm minimum in depth without intruding into required circulation area for basin
   (2) As a separate shelf
      (a) Not to intrude into required washbasin circulation
      (b) Height to be 900mm to 100mm
      (c) Width 120mm minimum
      (d) Length 300 to 400mm
      (e) Recommend shelf be installed on wall beside existing basin

x) *Soap dispenser, paper towel dispenser and hand dryer for washbasin (AS1428.1-2009; Clause 15.4.3)*
   (1) to be operable by one hand,
   (2) outlet to be 900 to 1100mm AFFL;
   (3) to be located 500mm minimum from any internal corner
   (4) Note handrail is where provided

xi) *Shower head (AS1428.1-2009; Clause 15.5.6)*
   (1) Adjustable height shower head on vertical rail;
   (2) wall outlet for shower to be installed 700mm +/- 5mm AFFL;
   (3) top of vertical shower head support grabrail to be 1880 to 1900mm AFFL;
   (4) bottom of vertical shower head grab rail to be 800 to 810mm AFFL
   (5) useable in a seated position
   (6) capable of withstanding 1100N (AS1428.1-2009 Clause 17)

xii) *Soap holder for shower (AS1428.1-2009; Clause 15.5.7)*

xiii) *Shower seat (AS1428.1-2009; Clause 15.5.9)*
   (1) to be self-draining;
   (2) slip resistant;
   (3) withstand 1100 N force in any position and any direction

xiv) *Clothes hanging devices (AS1428.1-2009; Clause 15.5.10)*
   (1) two to be provided for shower;
   (2) installed 1200 to 1350 mm AFFL;
   (3) hook 1 - 400 +/- 10mm from edge of shower seat short edge;
   (4) hook 2 - 600 +/- 10 from edge of shower seat short edge;

- Sanitary facility walls may need to be strengthened for installation of grab rails so as to meet the required force ratings of 1100 N

Appendix D: Adaptable Housing Compliance Checklists

The following is a clause-by-clause assessment of the architectural drawings against AS4299 Class C All essential features for Adaptable Housing (refer to Appendix A Schedule of Features for Adaptable Housing 1995).

#	Access Requirement	AS4299 Clause	Access Comments
	Drawings		
1.	Provision of drawings showing the housing unit in its pre-adaptation and post-adaptation stages.	**Essential 2.3**	*Drawings DA701, DA702, DA703, DA704 and DA705 show the Adaptable Units in pre and post-adaptation layouts.*
	Siting		
2.	A level or gently sloping site with up to 1:14 gradient	**3.2.2***	*Level or near level entry is proposed from the allotment boundary into the entry lobbies for both buildings*
3.	A continuous accessible path of travel from street frontage, vehicle parking and visitors parking to entry complying with AS 1428.1.	**Essential 3.3.2**	*The walkway gradients are reasonably level.* *From the basement car park, there are four lifts shown on drawings to link all floors in the development. These lifts comply with requirements of AS1735.12 in Part E3.6b of the Building Code of Australia.*
4.	Additional paths and walkways to be continuous, slip resistant and and hard surfaced with gradients complying with AS1428.1	**3.3.2 ****	*Additional paths within the site will be accessible.*
5.	Within a residential estate development, common use facilities to be accessible	**3.3.3 ***	*Accessible pathways will be provided to the common areas.*
6.	Within a residential estate development, street names with	**3.3.3 ****	*Consideration to be given to this residential estate development.*

	house numbers at each intersection.		
7.	Within a residential estate development, internal roadways to be separate from pedestrian walkways	**3.3.3 ***	*Separate pedestrian walkways will be provided.*
	Security		
8.	Pathway lighting shall be positioned at low height to avoid glare and to provide min. 50 lux at ground level	**3.6.1 ***	*Achievable.*
9.	Clear line of sight from a well-lit vehicle drop-off point to safe pedestrian entry point	**3.6.2 ***	*Complies.*
	Letterboxes		
10.	Within residential estate developments, letterboxes centrally located adjacent to street entry. Lockable.	**3.8 ***	*Letterboxes to be located within a designated Mail Room in the entry lobby adjacent to street entry of each building.*
11.	Letterboxes to be on hard standing level area connected to accessible pathway.	**Essential 3.8**	*Letterboxes to be provided on an accessible pathway.*
12.	Letterbox area roofed in a well-lit location.	**3.8 ***	*Within the entry lobby*
13.	Parcel rack included with letterboxes	**3.8 ***	*Design of letterboxes required for Construction Certificate.*
	Private Car Accommodation		
14.	Carparking space or garage min. area 6.0m x 3.8m.	**Essential 3.7.2**	*Residential parking is provided on different levels for the Adaptable Units* ● *37 spaces which are 2400mm width with 2400mm shared space. (Design complies with AS2890.6)*

			• *1 space designed to comply with AS4299*
15.	Roof to car parking space	**3.7.1 ***	*Provided in the designated parking levels of building.*
16.	Internal clearance of garage or carport 2.5m min	**3.7.2 ****	*Basement clearance at adaptable car spaces to provide 2500mm.*
17.	Provision for power-operated roller door to garage	**3.7.2 ****	*There is a vehicle entry door.*
18.	Covered access to dwelling unit	**3.7.3 ***	*Complies.*
19.	Illumination level min. 50 lux	**4.10 ****	*To be assessed at CC.*
	Accessible Entry		
20.	At least one accessible entrance.	**Essential 4.3.1**	*Adaptable Units show clear openings of 850mm with sufficient latch side spaces.*
21.	Entry protected by porch or similar	**4.3.1 ****	*Complies.*
22.	Accessible entry to be level (i.e. max 1:40 slope).	**Essential 4.3.2**	*Entry to all adaptable units, appear level.*
23.	Threshold to be low-level (construction tolerance of 5mm permitted).	**Essential 4.3.2**	*Further design detail is to be provided at CC stage and to be checked during construction phases for each adaptable unit.*
24.	Landing to enable wheelchair manoeuvrability (i.e. 1550mm min. diameter)	**Essential 4.3.2**	*Complies.*
25.	Accessible entry door to have 850mm min. clear (920mm entry doors recommended).	**Essential 4.3.1**	*Complies.*
26.	Weatherproofed entry door	**4.3.3 ****	*Complies*

27.	Door lever handles and hardware to AS 1428.1 installed between 900-1100mm ffl.	**Essential 4.3.4**	*To be specified at Construction Certificate Stage.*
28.	Provision for combined door/security	**4.3.5 ***	*Complies.*
29.	Potential min. illumination level 300 lux	**4.10 ***	*To be specified at Construction Certificate Stage.*
	Exterior General		
30.	All external doors to be keyed alike	**4.3.4 ****	*To be specified at Construction Certificate Stage.*
31.	Provision for security screen to exterior opening or sliding windows and doors	**4.7.6 ***	*To be specified at Construction Certificate Stage.*
	Interior General		
32.	Internal doors to have 820 mm min effective door clearances (870mm leaf doors recommended).	**Essential 4.3.3**	*This complies for all adaptable units*
33.	Internal corridors min. clear width of 1000mm.	**Essential 4.3.7**	*Complies.*
34.	Compliance with AS 1428.1 for door approaches to visitable toilet and main bedroom pre - adaptation. Drawings of post adaptation door approaches in compliance with AS 1428.1.	**Essential 4.3.7**	*Complies*
35.	Window sills at max 730mm above floor level to living and	**4.7.2 and 4.6.2. ****	*To be specified at Construction Certificate Stage.*

	600mm above floor level to bedroom areas		
	Living Room & Dining Room		
36.	Circulation space of min. 2250 mm diameter clear of furniture.	**Essential 4.7.1**	*Complies.*
37.	Minimum 4 double GPO's	**4.7.3 ***	*To be specified at Construction Certificate Stage.*
38.	Telephone adjacent to GPO.	**Essential 4.7.4**	*To be checked at Construction Certificate.*
39.	Telephone outlet location between kitchen and living spce, adjacent to GPO.	**4.7.4 ****	*To be specified at Construction Certificate Stage.*
40.	Two TV antenna outlets adjacent to GPO	**4.7.5 ***	*To be specified at Construction Certificate Stage.*
41.	Potential illumination level min. 300 lux .	**Essential 4.10**	*To be checked at Construction Certificate.*
	Kitchen		
42.	Minimum width 2.7 m (1550 mm clear width between benches).	**Essential 4.5.2**	*For both kitchen types there will be opposing benches to be built 1200mm distance apart.* *The Kitchens will allow suitable 1550m clearances at post-adaptation, via relocation of the pre-adapted opposing kitchen bench.* *CC Drawings to show continuous flooring under the pre-adapted island bench for the required relocation at post-adaptation stage.* *CC Drawings to also have a note for Kitchen provisional plumbing points, capped off, so that benches can be increased to 1550mm clear between benches at a later stage*

43.	Circulation at doors to comply with AS 1428.1.	**Essential 4.5.3**	*Complies.*
44.	Benches to include at least one worksurface of 800 mm length, which can be reinstalled or replaced within the range 750mm to 850mm ffl.	**Essential 4.5.5**	*Further design detail within kitchen shop fit drawing to be checked at Construction Certificate.e.*
45.	Refrigerator to be located adjacent to a work surface.	**Essential 4.5.5**	*To be checked at Construction Certificate.*
46.	Kitchen sink to be adjustable or replaceable to between 750mm to 850mm.	**Essential 4.5.6**	*To be checked at Construction Certificate.*
47.	Kitchen sink bowl max. 150mm deep.	**Essential 4.5.6**	*To be checked at Construction Certificate.*
48.	Tap set to be capstan, lever type or lever mixer.	**Essential 4.5.6(e)**	*As above.*
49.	Tap set located within 300mm of front of sink.	**Essential 4.5.6(e)**	*As above.*
50.	Installation of thermostatic mixing valve	**4.5.6 (f) ***	*To be specified at Construction Certificate Stage.*
51.	Cooktops to include either front or side controls with raised cross bars.	**Essential 4.5.7**	*To be checked at Construction Certificate.*
52.	Cooktops to include isolating switch.	**Essential 4.5.7**	*To be checked at Construction Certificate.*
53.	Work surface min. 800mm length adjacent to cooktop at same height.	**Essential 4.5.7**	*To be checked at Construction Certificate.*

54.	Oven located adjacent to an adjustable or replaceable work surface.	**Essential 4.5.8**	*As above.*
55.	Provision for microwave oven at height of 750mm-1200mm above floor.	**4.5.9 ****	*To be specified at Construction Certificate Stage.*
56.	Central Light with second light over sink. Illumination levels 300-550lux.	**4.10 ***	*To be specified at Construction Certificate Stage.*
57.	Adjustable shelving:	**4.5.10****	*To be specified at Construction Certificate Stage.*
58.	Location of cupboard handles	**4.5.10***	*To be specified at Construction Certificate Stage.*
59.	GPOs to comply with AS 1428.1. At least one double GPO within 300mm of front of work surface.	**Essential 4.5.11**	*As above*
60.	GPO for refrigerator to be easily reachable when the refrigerator is in its operating position.	**Essential 4.5.11**	*As above.*
61.	Slip resistant floor surface	**Essential 4.5.4**	*To be checked at Construction Certificate.*
	Bedroom		
62.	At least one bedroom of area sufficient to accommodate queen size bed and wardrobe and AS 1428.2 circulation requirements of min. 1000mm to one side of bed and 180° wheelchair turn (2070mm x 1540mm)	**Essential 4.6.1**	*Complies.*

63.	2 double GPO's on bedhead wall	**4.6.3 ***	*To be specified at Construction Certificate Stage.*
64.	Min. of 1 GPO opposite wall	**4.6.3 ****	*To be specified at Construction Certificate Stage.*
65.	Telephone outlet next to bed on the side closest to door	**4.6.5 ****	*To be specified at Construction Certificate Stage.*
66.	TV antenna point and double GPO on opposite wall to bedhead	**4.6.6 ***	*To be specified at Construction Certificate Stage.*
67.	2 way light switches	**4.6.4 ***	*To be specified at Construction Certificate Stage.*
68.	Potential illumination 300 lux	**4.10 ***	*To be specified at Construction Certificate Stage.*
69.	Sliding doors on wardrobe with full length mirror	**4.6.7 ****	*As Above.*
	Other Bedrooms		
70.	2 double GPO's on bedhead wall	**4.6.3 ***	*To be specified at Construction Certificate Stage.*
71.	2 way light switches	**4.6.4 ***	*To be specified at Construction Certificate Stage.*
72.	Telephone outlet next to GPO	**4.6.5 ****	*To be specified at Construction Certificate Stage.*
73.	TV antenna point next to GPO	**4.6.6. ***	*To be specified at Construction Certificate Stage.*
74.	Potential illumination 300 lux	**4.10 ***	*To be specified at Construction Certificate Stage.*
	Bathroom		
75.	Provision for bathroom area to comply with AS 1428.1:2009 (Min dimensions for combined, accessible shower and toilet).	**Essential 4.4.1**	*The dimensions for combined accessible shower and toilet for Pre and Post Adaptation drawings have the capacity to comply with AS1428.1 (2009).*

76.	Slip-resistant floor surface as per AS/NZ4586.	**Essential 4.4.2**	*To be checked at Construction Certificate.*
77.	Hobless shower recess. Minimum size 1160mm X 1100mm to comply with AS 1428.1. (AS4299 Figures 4.6 and 4.7).	**Essential 4.4.4(f)**	*Details have been provided for Post Adaptation to comply.*
78.	Shower area waterproofed to AS3740 with floor to fall to waste.	**Essential 4.4.4(f)**	*Demonstrate in wet area details at Construction Certificate*
79.	Recesssed soap holder.	**Essential 4.4.4(f)**	*Demonstrate in wet area details at Construction Certificate*
80.	Shower taps positioned for easy reach to access side of shower sliding track.	**Essential 4.4.4(f)**	*Demonstrate in wet area details at Construction Certificate*
81.	Shower waste min.80mm diameter	**4.4.4(f) ****	*To be specified at Construction Certificate Stage.*
82.	Provision for adjustable, detachable hand held shower hose mounted on a slider grab rail or fixed hook (plumbing and wall-strengthening provision).	**Essential 4.4.4(h)**	*Demonstrate in wet area details at Construction Certificate*
83.	'Provision' for grab rail in shower (refer to figure 4.7) to comply with AS 1428.1.	**Essential 4.4.4(h)**	*Demonstrate in wet area details at Construction Certificate*
84.	Provision for additional grabrail	**4.4.4 (h) ***	*To be specified at Construction Certificate Stage.*
85.	Provision for folding seat in shower.	**4.4.4 (h) ****	*Demonstrate in wet area details at Construction Certificate*
86.	Taps set to be capstan or lever	**Essential 4.4.4(c)**	*Demonstrate in wet area details at Construction Certificate*

	handles with single outlet.		
87.	Installation of thermostatic mixing valve	**4.4.4 (b) ***	*N/A*
88.	Provision for washbasin with clearances to comply with AS 1428.1 (if to be used in conjunction with “visitable toilet” or accessible toilet).	**Essential 4.4.4(g)**	*Demonstrate in wet area details at Construction Certificate*
89.	Wall cabinet with light	**4.4.4 (d) ***	*To be specified at Construction Certificate Stage.*
90.	Double GPO beside mirror.	**Essential 4.4.4(d)**	*Demonstrate in wet area details at Construction Certificate*
91.	Potential illumination level 300lux	**4.10 ***	*Demonstrate in wet area details at Construction Certificate*
	Toilet		
92.	Provision of either “visitable toilet” or accessible toilet on the entrance level to comply with AS1428.1. *Visitable toilet – a toilet which has a space of minimum 1250mm in front of the toilet x 900mm wide clear of door swings and fixtures. See AS4299.1.1 Fig 1.1.*	**Essential 4.4.1 4.4.3**	*Drawings show a visitable toilet in the main bathroom for adaptable units with a clear space 900mm x 1250mm in front of the toilet to comply.*
93.	Provision to comply with AS1428.1	**Essential 4.4.1**	*Complies.*
94.	Location of WC pan at minimum 600mm from the rear wall and 450mm from the side wall as per AS4299 Figure 4.3.	**Essential 4.4.3**	*Show on construction certificate drawings, for ease of plumbing modifications, It is advised to initially install WC pan plumbing within main bathrooms of adaptable units at correct distance from the fixed walls.*

95.	Provision for grab rail zone as per AS4299 Figure 4.6.	**Essential 4.4.4(h) Fig. 4.5**	*Show on construction certificate drawings, walls to be strengthened with 12mm structural plywood if framed walls are used.*
96.	Slip-resistant floor surface compliant with AS/NZ4586 (vitreous tiles similar).	**Essential 4.4.2**	*Flooring schedule required for Construction Certificate.*
97.	Recessed toilet roll holder	**4.4.3 ****	*To be specified at Construction Certificate Stage.*
	Laundry		
98.	Circulation at door to comply with AS 1428.1 Figure 12.	**Essential 4.8**	*Complies.*
99.	Adequate circulation space in front of or beside appliances (min. 1550 mm clear depth forward of appliances).	**Essential 4.8**	*Pre-adaptation the laundry area will be enclosed.* *As the walls are not load bearing, they can be removed to provide 1550mm clear post adaptation.* *Alternately the hinges on the doors to open 180 degrees.*
100.	Provision for automatic washing machine.	**Essential 4.8 (e)**	*Space is available for an automatic washing machine.*
101.	Provision for drier	**4.8 (f) ***	*N/A*
102.	If clothes line is located externally in a common are, an accessible path of travel to clothes line must be provided.	**Essential 4.8 (a)**	*There is a balcony area adjacent to living areas with sliding doors.* *During the construction stages confirmation is required for sliding door thresholds to be capable of facilitating wheelchair access to comply with AS1428.1 (2009).* *Ensure there is a level transition between the internal flooring, sliding door threshold and external floor surface*
103.	Installation of thermostatic mixing valve	**4.8 (d) ***	*To be specified at Construction Certificate Stage.*
104.	Taps positioned at side of tub	**4.8 (c) ****	*To be specified at Construction Certificate Stage.*

105.	Double GPO shall be provided as a minimum.	**Essential 4.8 (g)**	*To be checked at Construction Certificate.*
106.	Provision of shelf for soaps and similar, 1200mm max, height	**4.8 (h) ****	*To be specified at Construction Certificate Stage.*
107.	Potential illumination level 300 lux generally with 550 lux task lighting	**4.10 ***	*To be checked at Construction Certificate.*
108.	Slip resistant floor surface as per AS/NZ4586.	**Essential 4.9.1**	*To be checked at Construction Certificate.*
	Storage		
109.	Linen cupboard min. 600mm wide with adjustable shelving	**4.11.5 ***	*To be specified at Construction Certificate Stage.*
	Door Locks		
110.	Door hardware operable with one hand, located 900 – 1100 mm above floor.	**Essential 4.3.4**	*At Construction Certificate, door schedule required to check for compliance.*
	Floor Coverings		
111.	Slip resistant surfaces – balconies and external paved areas (vitreous tile or similar)	**4.9.1 ***	*Provide flooring schedule at Construction Certificate.*
	Ancillary Items		
112.	Switches located 900 – 1100mm above floor in line with door handles.	**4.11.1 ***	*Construction Certificate drawings to show switches to be 900mm – 1100mm above floor level.*
113.	GPO's located not less than 600 above floor.	**4.11.1 ***	*Construction Certificate drawings to show GPO's to be 600mm above floor level and not less than 500mm from an internal corner*

114.	Electrical distribution board located inside housing unit	**4.11.2 ****	*To be specified at Construction Certificate Stage.*
115.	Window controls located in an accessible position	**4.11.4 ****	*To be specified at Construction Certificate Stage.*
	Garbage		
116.	Provision for bin in an accessible location.	**4.11.6 ***	*There is a waste chute located on each level next to the lift.*
117.	Provision for external wheelchair storage	**4.11.6 ****	*To be specified at Construction Certificate Stage.*
118.	Provision for external battery charging facility	**4.11.6 ****	*To be specified at Construction Certificate Stage.*
119.	Guide dog accommodation	**4.11.6 ****	*To be specified at Construction Certificate Stage.*

Further Comments AS4299 – 1995:
Appendix A - Schedule of features for Adaptable Housing
The above checklist confirms that 37 adaptable Units have the capacity to satisfy the requirement of Adaptable House Class C Essential Features.
The number of essential features incorporated into the design is 55 items.
In addition to this, where there are clauses with (*) this indicates a First priority desirable feature and clauses with (**) indicate a desirable feature.

Livable Housing Guidelines SILVER LEVEL	
Y = YES; N = NO; D = Design detail required at CC; N/A = Not Applicable	
Element	Overall compliance
1 Dwelling access	
Performance Statement There is a safe and continuous step-free pathway from the street entrance and/or parking area to a dwelling entrance that is level.	
(a) Provide a safe and continuous pathway from the front boundary of the allotment to an entry door to the dwelling EXCEPT where the average slope of the ground for the path is steeper than 1:14	Y
(b) The path of travel as referred to in (a) should have a minimum clear width of · SILVER 1000mm	Y
i. No steps	Y
ii. An even, firm, slip resistant surface;	D
iii. A crossfall of not more than 1:40;	D
iv. Where ramps are required they should have landings provided at no greater than 9m for 1:14 ramps and no greater than 15m for ramps steeper than 1:20. Landings should be no less than 1200mm in length	D
(c) The path of travel referred to in (a) may be provided via an associated car parking space for the dwelling. Where a car parking space is relied upon as the safe and continuous pathway to the dwelling entrance the space should incorporate:	
i. minimum dimensions of at least · SILVER 3200mm (width) x 5400mm (length) * applies to townhouses, villas, single residential dwellings ie Class 1a	N/A Entry to the dwelling is via the internal road or the car parking space in the basement of the building. This requirement does not apply as the car parking space is not the only safe and continuous path to the dwelling entrance. NB *individual car parking bays provided in basement 2500mm
ii. an even, firm and slip resistant surface; and	D
iii. a level surface (1:40 maximum gradient, 1:33 max gradient for	D

bitumen)	
(d) A step ramp may be incorporated at an entrance doorway where there is a change in height of 190mm or less. The step ramp should provide:	D
i. A maximum gradient of 1:10	
ii. A minimum clear width of 1000mm (which should reflect the path width)	
A maximum length of 1900mm	
i. (e) Where a ramp is part of the pathway, level landings no less than 1200mm in length, exclusive of the swing of the door or gate that opens onto them, must be provided at the head and foot of the ramp	
2 Dwelling Entrance	
Performance Statement There is at least one level (step-free) entrance into the dwelling to enable home occupants to easily enter and exit the dwelling.	
a) The dwelling should provide an entrance door with - i. a minimum clear opening width of · SILVER 820mm (see Figure 2(a));	Y
ii. a level (step-free) transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled); and	D
iii. reasonable shelter from the weather.	Y
b) A level landing area of at least · SILVER 1200mm x 1200mm should be provided at the level (step free) entrance door.	Y
c) Where the threshold at the entrance exceeds 5mm and is less than 56mm, a ramped threshold may be provided (see Figure 1(b)).	D
d) The level (step-free) entrance should be connected to the safe and continuous pathway as specified in Element 1.	Y
3 Internal doors and corridors	
Performance Statement Internal doors and corridors facilitate a comfortable and unimpeded movement between spaces	
a) Doorways to rooms on the entry level used for living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment purposes should provide:	
i) a minimum clear opening width of · SILVER 820mm	Y
ii) a level transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or beveled).	D

b) Internal corridors/passageways to the doorways referred to in (a) should provide a minimum clear width of SILVER 1000mm	Y
4 Toilet	
Performance Statement The ground (or entry) level has a toilet to support easy access for home occupants or visitors	
a) Dwellings should have a toilet on the ground (or entry) level that provides:	
i) a minimum clear width of 900mm between the walls of the bathroom if located in a separate room; and	Y
ii) a minimum 1200mm clear circulation space forward of the toilet pan exclusive of the swing of the door in accordance with Figure 3(a).	Y
iii) toilet pan located in corner of room to enable installation of grab rails at a future date	Y
5 Shower	
Performance Statement The bathroom and shower is designed for easy and independent access for all home occupants	
a) One bathroom should feature a slip resistant, hobless (step- free) shower recess. Shower screens are permitted provided they can be easily removed at a later date.	Y
b) The shower recess should be located in the corner of the room to enable the installation of grabrails at a future date.	Y
6 Reinforcement of bathroom and toilet walls	
Performance statement The bathroom and toilet walls are built to enable grabrails to be safely and economically installed	
a) Except for walls constructed of solid masonry or concrete, the walls around the shower, bath (if provided) and toilet should be reinforced to provide a fixing surface for the safe installation of grabrails.	
b) The walls around the toilet are to be reinforced by installing:	
i) noggings with a thickness of at least 25mm in accordance with Figure 6(a); or	
ii) sheeting with a thickness of at least 12mm in accordance with Figure 6(b).	
c) The walls around the bath are to be reinforced by installing:	
noggings with a thickness of at least 25mm in accordance with Figure 7(a); or	
sheeting with a thickness of at least 12mm in accordance with Figure 7(b).	D

d) The walls around the hobless (step-free) shower recess are to be reinforced by installing:	
noggings with a thickness of at least 25mm in accordance with Figure 8(a); or	
sheeting with a thickness of at least 12mm in accordance with Figure 8(b).	
7 Internal Stairways	
Performance statement Where installed, stairways are designed to reduce the likelihood of injury and also enable future adaptation	
a) Stairways in dwellings must feature:	
i) A continuous handrail on one side of the stairway where there is a rise of more than 1 metre.	There are no stairs within the livable units.